

## EXPRESS TERMS

### ITEM 12-1

#### Title 24, Part 4, California Mechanical Code

##### Chapter 1 - General

Adopt entire 2003 Uniform Mechanical Code (UMC) Chapter 1 and carry forward existing amendments of the 2001 California Mechanical Code (CMC) for OSHPD 1, 2, 3 & 4. Also, amend Section 108.1.1.12 as follows:

**108.1.1.12 [for OSHPD] Office of Statewide Health Planning and Development**

**108.1.1.12.1 [for OSHPD 1]**

*Application – General acute-care hospitals and acute psychiatric hospitals, excluding distinct part units or distinct part freestanding buildings providing skilled nursing or intermediate-care services. For structural Regulations: Skilled nursing facilities and/or intermediate-care facilities except those skilled nursing facilities and intermediate-care facilities of single story, Type V, wood or light steel-frame construction.*

**108.1.1.12.2 [for OSHPD 2]**

*Application – Skilled nursing facilities and intermediate-care facilities, including distinct part skilled nursing and intermediate-care services on a general acute-care or acute psychiatric hospital license, provided either in a separate unit or a freestanding building. For Structural Regulations: Single-story, Type V skilled nursing facility and/or intermediate-care facilities utilizing wood or light steel-frame construction.*

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##### NOTATION:

Authority: Health and Safety Code Sections 18928 and 129850

Reference: Health and Safety Code Section 1275 and 129850

#### ITEM 12-1 – Committee Recommendations

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(END OF ITEM)

### ITEM 12-2

##### Chapter 2 - Definitions

Adopt entire 2003 UMC Chapter 2 and carry forward existing amendments of the 2001 CMC for OSHPD 1, 2, 3 & 4.

#### ITEM 12-2 – Committee Recommendations

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(END OF ITEM)

#### ITEM 12-3

##### Chapter 3 – General Requirements

Adopt entire 2003 UMC Chapter 3 and carry forward existing amendments of the 2001 CMC for OSHPD 1, 2, 3 & 4 with the following modifications:

##### **SECTION 316.0 – ESSENTIAL MECHANICAL PROVISIONS [FOR OSHPD 1, 2, 3 & 4]**

*During periods of power outages emergency electrical power shall be provided for the following equipment:*

**316.1** *(Does not apply to OSHPD 3.) All heating equipment necessary to maintain a minimum temperature of 60°F (15.6°) in patient areas which are not specified in Table 315.*

**316.2** *All heating equipment necessary to maintain the minimum temperatures for sensitive areas as specified in Table 315.*

**316.3** *Equipment necessary for humidification of the areas listed in Table 315.*

**316.4** *All supply, return and exhaust fans required to maintain the positive and negative air balances as required in Table 4-A.*

**316.5** *All control components and control systems necessary for the normal operation of equipment required to have emergency electrical power.*

##### **NOTATION:**

Authority: Health and Safety Code Sections 18928 and 129850

Reference: Health and Safety Code Section 1226 and 129850

#### ITEM 12-3 – Committee Recommendations

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(END OF ITEM)

#### ITEM 12-4

##### Chapter 4 – Ventilation-Air Supply

Adopt entire 2003 UMC Chapter 4 and carry forward existing amendments of 2001 CMC for OSHPD 1, 2, 3 & 4 with the following modifications:

**407.4.1.3** *Corridors shall not be used to convey supply, return or exhaust air to or from any room.*

**EXCEPTION 1:** *Small rooms [30 square feet (2.79 m<sup>2</sup>) or less] which are mechanically exhausted, such as bathrooms, toilet rooms and janitors' closets opening directly on corridors.*

**EXCEPTION 2:** *Air from corridors may be used as makeup air to ventilate toilet rooms of 50 square feet (4.7 m<sup>2</sup>) or less which are mechanically exhausted opening directly onto corridors.*

**EXCEPTION 2 3:** *Air transfer caused by pressure differentials in rooms required to have a positive or negative air balance by Table 4-A or Table 4-C.*

**NOTATION:**

Authority: Health and Safety Code Sections 18928 and 129850

Reference: Health and Safety Code Section 1226, 1275, 129790 and 129850

**ITEM 12-4 – Committee Recommendations**

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(END OF ITEM)

**ITEM 12-5**

**408.1.5** *Filter bank No. 1 shall be located upstream of the air-conditioning equipment. Filter bank No. 2 and filter bank No. 3 shall be located downstream of the supply fan and all cooling and humidification equipment with efficiencies as indicated in Table 4-B or Table 4-C.*

**EXCEPTION:** *Dry steam-type humidifiers for local room humidity control may be installed downstream of filter bank No. 2 the final filter bank where designs are specifically approved by the enforcing agency.*

**408.1.6** *Filter bank No. 2 and filter bank No. 3 media ...*

**NOTATION:**

Authority: Health and Safety Code Sections 18928 and 129850

Reference: Health and Safety Code Section 1226, 1275, 129790 and 129850

**ITEM 12-5 – Committee Recommendations**

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(END OF ITEM)

**ITEM 12-6**

**Chapter 5 – Exhaust Systems**

Adopt entire 2003 UMC Chapter 5 and carry forward existing amendments of 2001 CMC for OSHPD 1, 2, 3 & 4. Also, existing amendment is being relocated from Section 509.2 to 508.1:

**Section 508.0 Hoods.**

**Section 508.1 Construction.** The hood or that portion of a primary collection ...

All hoods shall be secured in place *[For OSHPD 1, 2 & 4] to resist the lateral loads given in the California Building Code, Title 24, Part 2* by noncombustible supports.

**Section 509.2** ... Hoods shall be secured in place ~~*[For OSHPD 1, 2 & 4] to resist the lateral loads given in the California Building Code, Title 24, Part 2*~~ by noncombustible supports.

#### ITEM 12-6 – Committee Recommendations

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(END OF ITEM)

#### ITEM 12-7

##### Chapter 6 – Duct Systems

Adopt entire 2003 UMC Chapter 6 and carry forward existing amendments of 2001 CMC for OSHPD 1, 2, 3 & 4 with the following modifications:

##### 602.0 Material.

**602.1 General.** Supply air, return air, and outside air for heating, cooling, or evaporative cooling systems shall be conducted through duct systems constructed of metal as set forth in Tables 6-1, 6-2, 6-3, 6-4, 6-7, 6-8, 6-9, and 6-10, or metal ducts complying with UMC Standard No. 6-2 or the referenced HVAC duct construction standard in Chapter 17, Part II. Rectangular ducts in excess of 2 inches w.g. shall comply with UMC Standard No. 6-2 or the referenced HVAC duct construction standard in Chapter 17, Part II. Ducts, plenums, and fittings may be constructed of asbestos cement, concrete, clay, or ceramics when installed in the ground or in a concrete slab, provided the joints are tightly sealed.

Corridors shall not be used to convey air to or from rooms if the corridor is required to be of fire-resistive construction per the Building Code.

**EXCEPTION 1 :** *[For OSHPD 1, 2, 3 & 4]: In health facilities, air from corridors may be used as makeup air to ventilate small rooms of 30 square feet (2.79 m<sup>2</sup>) or less which are mechanically exhausted, such as bathrooms, ~~toilet rooms~~, janitor closets, and electrical or telephone closets opening directly onto corridors.*

**EXCEPTION 2:** *[For OSHPD 1, 2, 3 & 4]: In health facilities, air from corridors may be used as makeup air to ventilate ~~toilet rooms~~ of 50 square feet (4.7 m<sup>2</sup>) or less which are mechanically exhausted opening directly onto corridors.*

**EXCEPTION 2 3 :** *[OSHPD 1, 2, 3 & 4]: Air transfer caused by pressure differentials in rooms required to have a positive or negative air balance by Table 4-A.*

Concealed building spaces or independent construction within buildings may be used as ducts or plenums. ...

##### NOTATION:

Authority: Health and Safety Code Sections 18928 and 129850

Reference: Health and Safety Code Section 1226, 1275, 129790 and 129850

#### ITEM 12-7 – Committee Recommendations

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(END OF ITEM)

#### ITEM 12-8

##### 607.0 Ventilating Ceilings.

**607.1 General.** Perforated ceilings may be used for air supply within the limitations of this section. Exit corridors, when required to be of fire-resistive construction by the Building Code, shall not have ventilating ceilings.

**607.1.1 [For OSHPD 1, 2, 3 & 4]** Ventilating ceilings are not permitted in health facilities.

**EXCEPTION:** Designs specifically approved by the enforcing agency.

##### 607.2 Requirements ...

##### NOTATION:

Authority: Health and Safety Code Sections 18928 and 129850

Reference: Health and Safety Code Section 1226, 1275, 129790 and 129850

##### ITEM 12-8 – Committee Recommendations

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(END OF ITEM)

#### ITEM 12-9

##### Chapter 7 – Combustion Air

Adopt entire 2003 UMC Chapter 7 for OSHPD 1, 2, 3 & 4 without amendments:

The 2001 CMC amendment indicated below will not be carried forward to the 2003 UMC:

~~**707.2.1 Designed Installations—Compliance. [For OSHPD 1, 2, 3 & 4]** When, in the opinion of the authority having jurisdiction, the designed installation does not comply with Table 7-1 or its equivalent, calculations shall be submitted to the authority having jurisdiction for approval.~~

##### NOTATION:

Authority: Health and Safety Code Sections 18928 and 129850

Reference: Health and Safety Code Section 1226, 1275, 129790 and 129850

##### ITEM 12-9 – Committee Recommendations

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(END OF ITEM)

#### ITEM 12-10

##### Chapter 8 – Chimneys and Vents

Adopt entire 2003 UMC Chapter 8 for OSHPD 1, 2, 3 & 4 without amendments.

##### NOTATION:

Authority: Health and Safety Code Sections 18928 and 129850

Reference: Health and Safety Code Section 1226, 1275, 129790 and 129850

##### ITEM 12-10 – Committee Recommendations

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(END OF ITEM)

#### ITEM 12-11

##### Chapter 9 – Installation of Specific Equipment

Adopt entire 2003 UMC Chapter 9 and carry forward existing amendments of the 2001 CMC for OSHPD 1, 2, 3, & 4 with the following modifications:

##### 902.0 General.

(A) This chapter is applicable primarily to nonindustrial-type gas utilization equipment ...

(B) Gas utilization equipment shall not be installed ...

(C) Where the room size in comparison with the size of the equipment ...

**(D)** *[For OSHPD 1, 2 & 4] Warm air furnaces shall not be installed under openable windows on exterior walls.*

**(E)** *[For OSHPD 1, 2 & 4] A vented decorative appliance shall not be located in any hospital, skilled nursing facility, intermediate care facility or correctional treatment center.*

##### 903.0 Air Conditioning Equipment (Gas-Fired Air Conditioners and Heat Pumps). ...

##### NOTATION:

Authority: Health and Safety Code Sections 18928 and 129850

Reference: Health and Safety Code Section 1226, 1275, 129790 and 129850

##### ITEM 12-11 – Committee Recommendations

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(END OF ITEM)

#### ITEM 12-12

##### Chapter 10 – Steam and Hot-Water Boilers

Adopt entire 2003 UMC Chapter 10 for OSHPD 1, 2, 3 & 4 without amendments.

##### NOTATION:

Authority: Health and Safety Code Sections 18928 and 129850

Reference: Health and Safety Code Section 1226, 1275, 129790 and 129850

##### ITEM 12-12 – Committee Recommendations

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(END OF ITEM)

#### ITEM 12-13

##### Chapter 11 - Refrigeration

Adopt entire 2003 UMC Chapter 11 and carry forward existing amendments of 2001 CMC for OSHPD 1, 2, 3 & 4 with the following modifications:

##### 11-1 Refrigerant Groups<sup>1</sup>, Properties<sup>2</sup> and Allowable Quantities<sup>3 44, 13</sup>

(Data reprinted with permission from The American Society of Heating, Refrigerating, and Air-Conditioning Engineers)

Refrigerant	Chemical Formula	Chemical Name <sup>4</sup> (Composition for Blends)	Safety Group <sup>1</sup>	PEL <sup>5</sup> (ppm)	IDLH <sup>6</sup> (ppm)	Pounds per 1000 cf of Space <sup>7</sup>
R-11	CCl <sub>3</sub> F	Trichlorofluoromethane	A1	C100 <sup>8</sup>	4,000 <sup>10</sup>	1.60
R-12	CCl <sub>2</sub> F <sub>2</sub>	Dichlorodifluoromethane	A1	1000	40,000	12.00
R-13	CCF <sub>3</sub>	Chlorotrifluoromethane	A1	1000	67,000	18.00
R-13B1	CBrF <sub>3</sub>	Bromotrifluoromethane	A1	1000	57,000	22.00
R-14	CF <sub>4</sub>	Tetrafluoromethane (carbon tetrafluoride)	A1	1000	67,000	15.00
R-22	CHClF <sub>2</sub>	Chlorodifluoromethane	A1	1000 <sup>10</sup>	42,000 <sup>11</sup>	9.4
R-23	CHF <sub>4</sub>	Trifluoromethane	A1	-	-	-
R-113	CCl <sub>2</sub> FCClF <sub>2</sub>	1,1,2-trichloro-1,2,2-trifluoroethane	A1	1000	4500	1.90
R-114	CClF <sub>2</sub> CClF <sub>2</sub>	1,2-dichloro-1,1,2,2-tetrafluoroethane	A1	1000	50,000	9.40
R-123	CHCl <sub>2</sub> CF <sub>3</sub>	2,2-dichloro-1,1,1,-trifluoroethane	B1	10 <sup>10</sup>	4000 <sup>11</sup>	1.60

R-124	CHClFCF <sub>3</sub>	1,2-dichloro-1,1,1,-tetrafluoroethane	A1	-	-	-
R-134a	CF <sub>3</sub> CH <sub>2</sub> F	1,1,1,2-tetrafluoroethane	A1	1000 <sup>10</sup>	50,000 <sup>11</sup>	16.00
R-170	CH <sub>3</sub> CH <sub>3</sub>	Ethane	A3	1000	6,400	0.50
R-236fa	CF <sub>3</sub> CH <sub>2</sub> CF <sub>3</sub>	1,1,1,3,3,3-hexafluoropropane	A1	-	-	-
R-245fa	CF <sub>3</sub> CH <sub>2</sub> CHF <sub>2</sub>	1,1,1,3,3-pentafluoropropane	A3	-	-	-
R-290	CH <sub>3</sub> CH <sub>2</sub> CH <sub>3</sub>	Propane	A3	1000	4,400	0.50
R-400	Azeotrope	R-12/114	A1	-	-	-
R-401A	Azeotrope	R-22/152a/124 (53/13/34)	A1	-	-	-
R-401B	Azeotrope	R-22/152a/124 (61/11/28)	A1	-	-	-
R-401C	Azeotrope	R-22/152a/124 (33/15/52)	A1	-	-	-
R-402A	Azeotrope	R-125/290/22 (60/2/38)	A1	-	-	-
R-402B	Azeotrope	R-125/290/22 (38/2/60)	A1	-	-	-
R-404A	Azeotrope	R-125/143a/34a (44/52/4)	A1	-	-	-
R-407A	Azeotrope	R-32/125/134a (20/40/40)	A1	-	-	-
R-407B	Azeotrope	R-32/125/134a (10/70/20)	A1	-	-	-
R-407C	Azeotrope	R-32/125/134a (23/25/52)	A1	-	-	-
R-407D	Azeotrope	R-32/125/134a (15/15/70)	A1	-	-	-
R-407E	Azeotrope	R-32/125/134a (25/15/60)	A1	-	-	-
R-408A	Azeotrope	R-125/143a/22 (7/46/47)	A1	-	-	-
R-409A	Azeotrope	R-22/124/142b (60/25/15)	A1	-	-	-
R-410A	Azeotrope	R-32/125 (50/50)	A1	-	-	-
R-416A	Azeotrope	R-134a/124/600 (59/39.5/1.5)	A1	-	-	-
R-500 73.8% 26.2%	Azeotrope CCl <sub>2</sub> F <sub>2</sub> CClF <sub>2</sub> CHF <sub>3</sub>	R-12/125a (73.8/26.2) Dichlorodifluoromethane 1,1-difluoroethane	A1	1000 <sup>10</sup>	47,000 <sup>10</sup>	12.00
R-502 48% 51.2%	Azeotrope CHClF <sub>2</sub> CClF <sub>2</sub> CF <sub>3</sub>	R-23/13 (48.8/51.2) Chlorodifluoroethane 1-chloro-1,1,2,2,2-pentafluoroethane	A1	1000	67,000	15.00
R-503	Azeotrope	R-23/13 (48.8/51.2)	A1	1000	67,000	15.00
R-507A	Azeotrope	R-125/143a (50/50)	A1	-	-	-
R-508A	Azeotrope	R-23/116 (39/61)	A1	-	-	-
R-508B	Azeotrope	R-23/116 (46/54)	A1	-	-	-
R-509A	Azeotrope	R-22/218 (44/560)	A1	-	-	-
R-600	CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	Butane	A3	800	3,400	0.51
R-600a	CH(CH <sub>3</sub> ) <sub>2</sub> CH <sub>3</sub>	Isobutane (2-methyl propane)	A3	800	3,400	0.51
R-717	NH <sub>3</sub>	Ammonia	B2	50 <sup>12</sup>	500	0.022
R-718	H <sub>2</sub> O	Water	A1	-	-	-
R-744	CO <sub>2</sub>	Carbon Dioxide	A1	5000	50,000	5.70
R-1150	CH <sub>2</sub> =CH <sub>2</sub>	Ethene (ethylene)	A3	1000	5,200	0.38
R-1270	CH <sub>3</sub> CH=CH <sub>2</sub>	Propene (propylene)	B3	1000	3,400	0.37

For SI: 1 pound = 0.454kg, 1 cubic foot = 0.0283m<sup>3</sup>.

1 Refrigerant safety group designation is in accordance with Section 1102.0.

2 Refrigerant properties are those needed for this chapter.



**NOTATION:**

Authority: Health and Safety Code Sections 18928 and 129850

Reference: Health and Safety Code Section 1226, 1275, 129790 and 129850

**ITEM 12-14 – Committee Recommendations**

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(END OF ITEM)

**INITIAL STATEMENT OF REASONS****STATEMENT OF SPECIFIC PURPOSE AND RATIONALE:**

The Office of Statewide Health Planning and Development (OSHPD) is mandated to adopt the most recent edition of model code, as amended by the Office, pursuant to Health and Safety Code Section 18928. This proposed rulemaking represents the Office's proposal to adopt the 2003 Uniform Mechanical Code (UMC) published by International Association of Plumbing and Mechanical Officials (IAMPO) and carry forward existing California amendments of the 2001 California Mechanical Code (CMC). It was also necessary to propose a few editorial and minor technical modifications to the existing requirements for clarification and consistency within the code as identified below:

**Chapter 1**

**Section 108.1.1.12** is being amended for the following reason:

The Office of Statewide Health Planning and Development promulgates and enforces regulations for hospitals and skilled nursing facilities (SNFs) in California. Historically, the California Building Code has included different requirements for hospital-based skilled nursing units than it has for freestanding SNFs on a hospital license and for separately licensed SNFs.

Section 72103, Title 22, CCR, defines "skilled nursing facility" as "a health facility or a distinct part of a hospital which provides continuous skilled nursing care and supportive care to patients whose primary need is for availability of skilled nursing care on an extended basis." This definition makes no distinction between skilled nursing services that are provided as a distinct part unit in an acute care hospital, as a distinct part in a freestanding building on the hospital license, or a freestanding separately licensed SNF. Therefore, the regulations that apply to skilled nursing services should be the same, regardless of the type of facility in which the services are provided.

The purpose for this change is to make the regulations for skilled nursing facilities the same, whether the facility is a freestanding separately licensed SNF, a freestanding SNF building on a hospital license, or a distinct part SNF unit in a hospital building.

**Chapter 3**

**Section 316** is being amended to provide essential mechanical requirements for surgical clinics. This provision is currently being enforced pursuant to California Electrical Code Section 517-34. Including the requirement in the CMC will provide clarification and consistency with other parts of Title 24.

**Chapter 4**

**Section 407.4.1.3, Exception 2.** Section 407.4.1.3, exception 1, currently permits air from corridors to serve toilet rooms up to 30 square feet. However, Title 24 accessibility requirements do not permit a toilet room of 30 square feet. Since virtually all toilet rooms entered from corridors must be accessible to persons with disabilities, this exception provides no benefit for these rooms. Therefore, OSHPD is proposing a new exception to allow air from corridors to serve toilet rooms up to 50 square feet. This new exception applies only to toilet rooms since there is no reason to increase the minimum size of the other small room types identified in Section 407.4.1.3, Exception No. 1. The ventilation requirements for the toilet rooms will remain the same.

Changes shown to 407.4.1.3, exception 2 and section 707.4.1.5 are errata items from the 2002 annual code cycle that were not published.

**Section 408.1.5, Exception** is being amended to clarify that dry-steam type humidifiers may be installed downstream of the "final" filter bank instead of the No. 2 filter bank. Currently, rooms of a hospital are required to have one, two or three filter banks depending on the designation/use of that room. The amendment will clarify that no matter how many filter banks are in the ventilation system the dry-steam humidifiers may be located downstream from the last filter bank. This amendment also provides for greater flexibility of HVAC design for hospitals.

## **Chapter 5**

**Section 508.1.** An existing amendment from Section 509.2, 2001 CMC, is being carried forward to the appropriate location in the 2003 UMC (Section 508.1).

## **Chapter 6**

**Section 602, Exception-** Section 602, exception 1, currently permits air from corridors to serve toilet rooms up to 30 square feet. However, Title 24 accessibility requirements do not permit a toilet room of 30 square feet. Since virtually all toilet rooms entered from corridors must be accessible to persons with disabilities, this exception provides no benefit for these rooms. Therefore, OSHPD is proposing a new exception to allow air from corridors to serve toilet rooms up to 50 square feet. This new exception applies only to toilet rooms since there is no reason to increase the minimum size of the other small room types identified in Section 602, Exception No. 1. The ventilation requirements for the toilet rooms will remain the same.

**Section 607.1.1** is being amended to indicate that the enforcement of the requirement applies to licensed clinics (OSHPD 3). This change is consistent with the enforcement of a related requirement in Section 407.4.1.4.

## **Chapter 7**

**Section 707.2.1** is an existing OSHPD amendment of the 2001 CMC which is no longer necessary, since the requirement is now included in the 2003 UMC.

## **Chapter 9**

The following two amendments of the 2001 CMC will be carried forward and need to be relocated: Section 904.8 regarding prohibited locations for warm air furnaces and Section 912.0 regarding vented decorative appliances. Because of new/revised model code language and formatting these two amendments are being relocated as sub-items under Section 902.0-General of the 2003 UMC.

## **Chapter 11**

**Table 11-1, Footnote** - Renumbering the existing 2001 CMC, Table 11-1 Footnote No. 14 to No. 13 will accommodate the reduced number of footnotes in the 2003 UMC Table 11-1.

### **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:**

There are no documents to identify.

### **CONSIDERATION OF REASONABLE ALTERNATIVES**

There are no alternatives to be considered by OSHPD. This proposal represents the mandated adoption of the model code.

**REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

This proposal will not impose an adverse economic impact on small businesses.

**FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.**

This proposal will not impose an adverse impact on businesses.